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10/661,152	09/12/2003	Norikazu Endo	23230-08142	6804

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EXAMINER
SERROU, ABDELALI

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 July 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3-15,17-28,30-40 and 42-61</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3-15,17-28,30-40 and 42-61</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12 September 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   In response to the office action mailed on 05/02/07, applicant filed an amendment on

07/25/07, amending claims 1, 15, 28, 40, and 53, and canceling claims 2, 16, 29, and 41. The

pending claims are 1, 3-15, 17-28, 30-40, and 42-61.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 15, 28, 40, and 53 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 8, 10-11, 15, 17-19, 21, 23-24, 28, 30-32, 34, 36, 40, 42-46, 48-49, 53-56,

58, and 60, are rejected under 35 U.S.C. 102(e) as being anticipated by Cooper et al. (hereinafter

Cooper) (U.S 6,757,362 filed on Mar. 6, 2000 , and issued on Jun. 29, 2004).

As per claims 1, 15, 28, 40, and 53, Cooper teaches:

receiving an utterance of the user (col. 2, line 39);

obtaining utterance parameters from the utterance, the utterance parameters indicating the state of the user (col. 43, lines 62-67, inherent in the process of determining the user's emotional state based on the received utterance);

determining the state of the user based upon the utterance parameters (col. 43, lines 62-67, wherein the Virtual Assistant (VA) determines the emotional state of the user based on the received utterances from the user) ;

adjusting the voice prompt by adjusting at least one of a tone of voice of the voice prompt, a content of the voice prompt, a prosody of the voice prompt, and a gender of the voice prompt based upon the determined state of the user (col. 44, lines 1-4); and wherein obtaining parameters comprises:

partitioning the utterance into segments (col. 2, lines 58-64, wherein the system identifies the boundaries between the spoken words, by detecting a user's pauses when recording a message); and

assigning one of a plurality of classifications to each segment, each classification corresponding to at least one of a plurality of states of the user (col. 2, lines 58-64, and col. 43wherein the system assigns an emotional state, i.e. calm or angry, based on a segment or word choice, such as "sorry").

As per claim 3 and 54, Cooper teaches generating an utterance parameter vector based upon the utterance parameters; converting the utterance parameter vector to an indication representing the state of the user; and determining the state of the user based upon the indication (inherent in analyzing speech utterances received from a user and automatically determining the user's emotional state, col. 43, lines 62-67).

As per claim 4, 17, 24, 30, and 42, Cooper teaches determining the number of segments for each classification, and dividing the number of segments for each classification by a total number of segments in the utterance (inherent in determining speech prosody, i.e. speech rate, loudness or volume (col. 43, line 64-65).

As per claim 5, 18, 31, 43, and 55, Cooper teaches applying a function to the utterance parameter vector to generate one of a scalar, a vector of fuzzy classes, and an index representing the state of the user (inherently disclosed in storing information about the user's emotional state, for a future use, col. 44, lines 4-6).

As per claim 6, 19, 32, 44, and 56, Cooper teaches determining that the user is in a first state if the scalar is greater than a predetermined threshold and that the user is in a second state if the scalar is not greater than the predetermined threshold (inherent in classifying the emotional state of the user as calm or angry, col. 43, line 67).

As per claim 8, 21, 34, 46, and 58, Cooper teaches adjusting the content of the voice prompt to use content that is consistent with the determined state of the user (col. 44, lines 1-6).

As per claims 10, 11, 23, 36, 48, and 60, Cooper teaches adjusting the prosody of the voice prompt, by pausing the voice prompt, to use prosody that is consistent with the determined state of the user (col. 47, lines 38-40, wherein the VA pauses and allows to the user to "barge in").

As per claims 45 and 49, Cooper teaches speech synthesizer module (text to speech engine, col. 5, line 54), and a speech storage module (...the VA stores temporary speech and log files, col. 18, lines 63-65) generates the audio waveform of the voice prompt to have a tone that is consistent with the determined state of the user.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 9, 20, 22, 33, 35, 47, 57, and 59, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Cooper in view of Pelland et al. (hereinafter, Pelland) (U.S 2002/0029203,

published on Mar. 7, 2002).

Cooper teaches determining the emotional state of the user (col. 43, lines 62-67).

Cooper does not explicitly teach adjusting the tone and the gender of the voice prompt to

use a tone that is consistent with the determined state of the user.

Pelland in the same field of endeavor teaches adjusting the tone ([0056] and [0057],

wherein the personal assistant (PA) adjust the voice tone to present to the user a personality that

has a lower level of formality and higher level of humility), and the gender ([0025], wherein the

role of the PA changes gender, influenced by the culture, and [0058], wherein the PA can switch

between voices, by selecting a different voice file and perhaps personality rules as well) of the

voice prompt to use a tone that is consistent with the determined state of the user.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

of the invention was made to modify the interactive system of Cooper by incorporating the tone,

and gender adjusters of Pelland's, to adjust the tone voice prompt based on the emotional state of

the user. Pelland suggests that this would provide effective ways to coordinate and handle the

electronic communications that such devices make possible.

Claims 12-14, 25-27, 37-39, 50-52, and 61, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Cooper in view of Millie et al. (hereinafter, Millie) (Admitted prior art

"Driver-Friendly Assistance System Interface").

Cooper teaches all the limitations of claim 1, upon which claims 12 and 13 depend.

Cooper does not explicitly teach wherein the system is an on-board computer used in an

automobile or a navigation system used in an automobile; receiving information on a driving

condition from the on-board computer or the navigation system and determining the state of the

user based upon the information on driving condition; and adjusting a graphical character display

corresponding to the voice prompt based upon the determined state of the user.

Millie in the same field of endeavor teaches wherein the system is an on-board computer

used in an automobile or a navigation system used in an automobile, and receiving information

on a driving condition from the on-board computer or the navigation system and determining the

state of the user based upon the information on driving condition (Page 2, wherein Chris (virtual

passenger) determines that Pat (driver) is annoyed at unusually heavy traffic, he expresses

sympathy about the traffic situation, and when he senses that the traffic begins to clear up, he

imitates a conversation); and adjusting a graphical character display corresponding to the voice

prompt based upon the determined state of the user (page 11, wherein the system takes pictures,

link them the sound files, and display them on a touch-screen to further assist the driver).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

of the invention was made to combine Millie's feature with the system of Cooper, because Millie

suggests that this would provide a provide a friendly system that determines the condition of the

driver and responds with feedback to alter conditions such as loneliness and boredom (page 4).

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Abdelali Serrou whose telephone number is 571-272-7638. The

examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A. Serrou
9/20/07

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